

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

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Claims 1-15 (previously cancelled)

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1                    Claim 16 (currently amended): A method of treating a ~~pathology~~ tumor  
2 in an animal or mammal caused by the absence of a tumor suppressor gene or the  
3 presence of a pathologically mutated tumor suppressor gene, the method comprising  
4 administering to the animal or mammal an effective amount of a recombinant adenovirus  
5 expression vector comprising: a) a partial or total deletion of a protein IX-encoding DNA  
6 sequence, and b) a gene encoding a foreign functional protein having a tumor suppressive  
7 function, under suitable conditions.

1                    Claim 17 (original): The method of claim 16, wherein the foreign protein  
2 is a functional tumor suppressor protein.

1                    Claim 18 (previously amended): A method of gene therapy comprising  
2 administering to a subject an effective amount of a recombinant adenovirus expression  
3 vector comprising: a) a partial or total deletion of a protein IX-encoding DNA sequence,  
4 and b) a gene encoding a foreign functional protein having a tumor suppressive function.

1                    Claim 19 (previously amended): A method of inhibiting the proliferation  
2 of a tumor in an animal comprising administering an effective amount of a recombinant  
3 adenovirus expression vector comprising a partial or total deletion of a protein IX DNA  
4 sequence and a gene encoding a foreign functional protein having a tumor suppressive  
5 function under suitable conditions to the animal.

1                    Claim 20 (original): The method of claim 19, wherein the gene encodes  
2 an anti-tumor agent.

1                   Claim 21 (original): The method of claim 20, wherein the anti-tumor  
2 agent is a tumor suppressor gene.

1                   Claim 22 (original): The method of claim 20, wherein the anti-tumor  
2 agent is a suicide gene or functional equivalent thereof.

1                   Claim 23 (previously amended): The method of claim 21, wherein the  
2 tumor is non-small cell lung cancer, small cell lung cancer, hepatocarcinoma, melanoma,  
3 retinoblastoma, breast tumor, colorectal carcinoma, leukemia, lymphoma, brain tumor,  
4 cervical carcinoma, sarcoma, prostate tumor, bladder tumor, tumor of the  
5 reticuloendothelial tissues, Wilm's tumor, astrocytoma, glioblastoma, neuroblastoma,  
6 ovarian carcinoma, osteosarcoma, or renal cancer.

1                   Claim 24 (original): The method of claim 19, wherein the vector is  
2 administered by intratumoral injection.

Claim 25 (previously cancelled)

1                   Claim 26 (previously amended) A method for reducing the proliferation  
2 of tumor cells in a subject, the method comprising administering under suitable  
3 conditions an effective amount of an adenoviral expression vector comprising:

4                   a) a partial or total deletion of a protein IX-encoding DNA sequence and  
5                   b) a gene encoding a suicide protein or a biologically active fragment  
6 thereof; and an effective amount of a thymidine kinase metabolite or a functional  
7 equivalent thereof.

1                   Claim 27 (original): The method of claim 26, wherein the thymidine  
2 kinase metabolite is ganciclovir or 6-methoxypurine arabinonucleoside or a functional  
3 equivalent thereof.

1                   Claim 28 (original): The method of claim 26, wherein the adenoviral  
2 expression vector is administered by injection into the tumor mass.

1                   Claim 29 (original): The method of claim 26, wherein the tumor cells are  
2 hepatocellular carcinoma.

⑨ 1                   Claim 30 (original): The method of claim 29, wherein the adenoviral  
2 expression vector is administered directly into the hepatic artery of the subject.

1                   Claim 31 (previously amended): A kit for reducing the proliferation of  
2 tumor cells comprising the components of the adenoviral expression vector of claim 26, a  
3 thymidine kinase metabolite or functional equivalent thereof, pharmaceutical carriers and  
4 instructions for the treatment of hepatocellular carcinoma using the kit components.

1                   Claim 32 (previously added): A method for obtaining expression of a  
2 tumor suppressor gene in a cell, the method comprising contacting the cell with an  
3 effective amount of a recombinant adenovirus expression vector comprising: a) a partial  
4 or total deletion of a protein IX-encoding DNA sequence, and b) a gene encoding a  
5 foreign protein having a tumor suppressive function; wherein the foreign protein is  
6 produced by the cell.

1                   Claim 33 (previously added) The method of claim 32, wherein the cell is  
2 present in a mammal.

1                   Claim 34 (previously added) The method of claim 33, wherein the cell is  
2 a tumor cell.

1                   Claim 35 (previously added) The method of claim 34, wherein the  
2 contacting of the tumor cell by the recombinant adenovirus expression vector is

3 accomplished by intratumoral or peritumoral injection of the recombinant adenovirus  
4 expression vector.

1 Claim 36 (previously added) The method of claim 32, wherein the  
2 foreign protein is a functional tumor suppressor protein.

1 Claim 37 (previously added) A method for obtaining expression of a  
2 suicide protein in a cell, the method comprising administering to the cell an effective  
3 amount of a recombinant adenovirus expression vector comprising: a) a partial or total  
4 deletion of a protein IX-encoding DNA sequence, and b) a gene encoding a suicide  
5 protein;

6 wherein an mRNA encoding the suicide protein is produced by the cell.

1 Claim 38 (previously added) The method of claim 37, wherein the cell is  
2 present in a mammal.

1 Claim 39 (previously added) The method of claim 38, wherein the cell is  
2 a tumor cell.

1 Claim 40 (previously added) The method of claim 39, wherein the  
2 contacting of the tumor cell by the recombinant adenovirus expression vector is  
3 accomplished by intratumoral or peritumoral injection of the recombinant adenovirus  
4 expression vector.

1 Claim 41 (previously added) The method of claim 37, wherein the  
2 suicide protein is a functional thymidine kinase protein, a functional *E. coli* DEO  $\Delta$   
3 protein, or a functional cytosine deaminase protein.

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